As of 26 June 2014

Summer School

„Methods and Tools for the Assessment, Modeling and Monitoring of Central Asian Water and Land Resources“

Summary Report

Organized by: Kazakh-German University (DKU)

In Cooperation with: CAWa project, University of Wuerzburg, GFZ German Research Centre for Geosciences, and the GIZ Transboundary Water Management in Central Asia Programme

Date: 12-24 May 2014

Place: DKU, Almaty

Trainer(s):

Main trainers:

- Prof. Dr. Christopher Conrad, University of Wuerzburg, DLR, Germany
- Yvonne Dernedde, University of Giessen / ZEU, Germany
- Dr. Abror Gafurov, GFZ German Research Centre for Geosciences, Germany
- Joachim Krois, Freie Universität Berlin, Germany
- Fabian Löw, University of Wuerzburg, Germany
- Birgit Mannig, University of Wuerzburg, Germany
- Dr. Samuel Nussbaumer, Zurich University/World Glacier Monitoring Service, Switzerland
- Dr. Sergiy Vorogushyn, GFZ German Research Centre for Geosciences, Germany

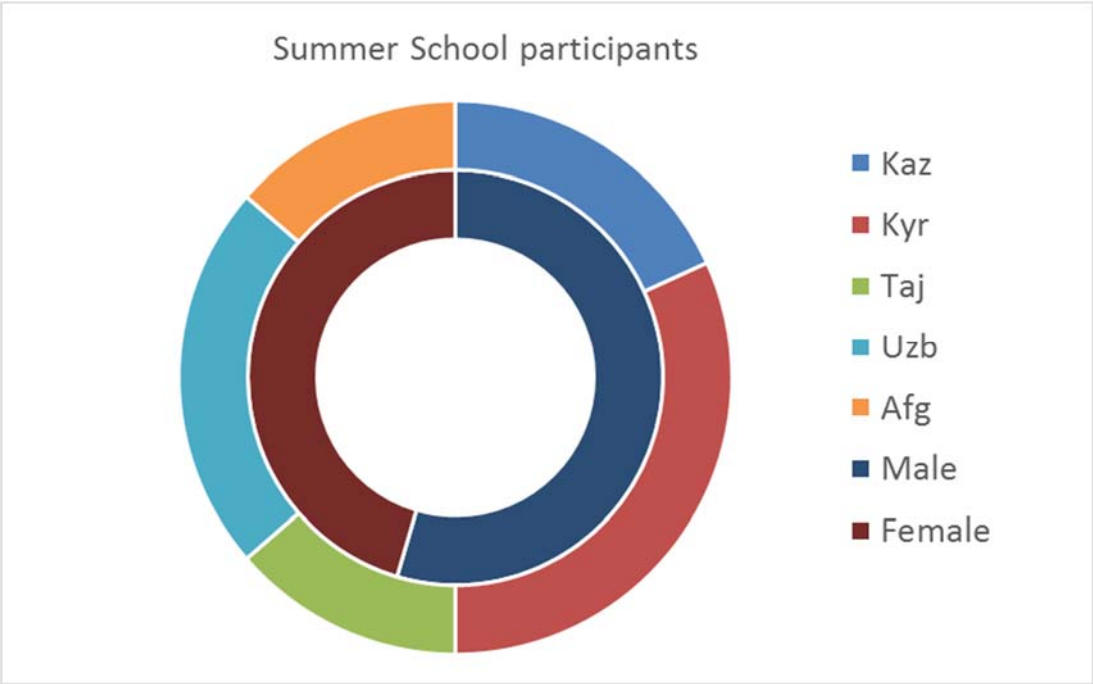
Additional Lecturers:

- Dr. Iskandar Abdullaev, Regional Environmental Centre for Central Asia CAREC, Kazakhstan
- Dr. Behrooz Abdolvand, Berlin Centre for Caspian Region Studies, Freie Universität Berlin, Germany
- Manon Cassara, World Bank
- Anastassiya Galaeva, Regional Center of Hydrology, KazHydromet, Kazakhstan
- Dr. Barbara Janusz-Pawletta, German-Kazakh University DKU, Kazakhstan
- Olga Kalashnikova, Central Asian Institute for Applied Geosciences, Kyrgyzstan
- Dr. Anatoli Katz, SIC ICWC, Uzbekistan
- Alexander Nikolayenko, GIZ Transboundary Water Management in Central Asia Programme, Kazakhstan
- Prof. Dr. Alim Pulatov, TIIM Tashkent Institute for Irrigation and Melioration, Uzbekistan
- Prof. Dr. Frank Schrader, GIZ Transboundary Water Management in Central Asia Programme, Germany

- Katy Unger-Shayesteh, GFZ German Research Centre for Geosciences, Germany
- Bolat Zubairov, German-Kazakh-University / Institute of Geography at the Academy of Sciences, Kazakhstan

Participants

The Summer School covered young motivated and dedicated master and PhD students as well as junior university teachers and researchers with interest in IWRM and its practical implementation. For selection of participants, an application form was developed and the other indicator for measuring interests of participants was their motivation letter. Some of the participants were winners of the national level Olympiad in "Integrated water management", which have been conducted by DKU and its partner Universities in the countries of Central Asia (refer the report of "Olympiad on IWRM"). Thus, with above-mentioned requirement there were 22 participants selected from 68 (sixty eight) applications from the countries: Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, and Afghanistan.



Objective of the training

The Summer School introduced scientific concepts, methods and tools for the analysis, modeling and monitoring of land and water resources in Central Asia. These methods are of great value in a framework of integrated water and land resources management (IWRM and IWLM).

The 2-week Summer School combined both theoretical lectures and practical exercises with discussion sessions on the implementation of IWRM and IWLM in Central Asia. The program included an introduction to geographical information systems (GIS), an overview on remote sensing applications for land and water resources monitoring, an introduction to hydrometeorological monitoring techniques, climate change impact assessment, and assessment of irrigation efficiencies.

The Summer School was funded by the German Federal Foreign Office in the frame of the CAWa Project as part of the "German Water Initiative for Central Asia" (so-called "Berlin Process").

Outcome

Participants gained theoretical and practical knowledge about applying GIS software in integrated water and land resource management. In order to sustain the gained knowledge, after each session the trainers offered a practical session, where participants could apply the presented methods and practice. In spite of the fact that GIS software is complicated, the trainers could motivate participants, so each session was completed successfully. For creating better atmosphere for learning visualization, handout materials (colored one) and portable computers were provided to the students.

Within the Summer School program it was also included a field trip to Bolshoe Almatinskoe Ozero (lake) and three observatories, the snow and avalanche monitoring station of KazHydromet, the Astrophysical Observatory, and the permafrost research station of the Institute of Geography at the Academy of Sciences of the Republic of Kazakhstan. In the stations, local specialists explained to the participants how they collect information on water resources and how they process it.

The last session of the summer school was dedicated to water management projects in the region. International and regional experts presented the various approaches to IWRM from the legal, political, technical, and practical perspectives. Along the projects there were representatives from water ministry, who explained about institutional aspect of water management.

After the completion of the summer school participants were awarded with certificate of completion and all course materials were provided in electronic version.

Feedback

In order to achieve the desired goal interactive methods, (combination of theory and practice and including case studies) were selected which was very successful. First of all the event brought together participants from the region of Central Asia and the organization of "out-of-agenda" events (like football, joint pizza and etc.) assisted to create an atmosphere of friendship and partnership among the participants, which is an important step towards future cooperation. Along this, it was a good chance for participants in the short period of time to receive a huge amount of information, which is very valuable for their further studies at their home universities and students research projects.